

FTLGM

13 September 1960

**Testing of the AP-225 Pressure Suit and Related Equipment
FTL-225B**

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1. Testing of the AP-225 pressure suit under FTL-225B was initiated as a result of a letter from Gen. Flickenger, HQ ARDC, to AFFTC requesting that the 6511th Test Group provide support for an expedited test program, reference ARDC letter titled, Support of Full Pressure Suit Tests, dated 18 July 1960 and AFFTC 1st Indorsement thereof dated 21 July 1960.
2. [] the ARDC test subject and program coordinator arrived at this Group on 23 August 1960 with two modified parachute assemblies (P/N 50C7024). Modification of the parachute assemblies consisted of: (a) removed the back protector pad and substituted a series of oxygen kit attaching loops, (b) removed the upper main lift-web of the parachute harness and substituted an upper main lift web with reserve parachute attaching rings.
3. A test program was initiated and circulated for preliminary coordination. The program called for four live jumps from pressure altitudes of 16,000, 15,000, 25,000 and 35,000 feet. Since [] has the only AP-225 pressure suit in existence, it was decided to make every effort to insure that he landed on the cleared area of the drop zone and not out in the sage brush where possible suit damage could occur. All jumps scheduled would be Radar controlled and an experienced 6511th Test Group test jumper would jump as a "spotter" prior to each of [] test jumps.
4. Integration of the 48-min. oxygen kit between the jumpers back and the parachute harness and pack caused excessive pressure to be placed on the pack closing loops which in turn placed too heavy a load on the F-1B automatic ripcord release. The excessive load on the automatic ripcord release caused two parachute failures in bench tests prior to start of the live jumps.
5. A conference was held on 5 September 1960 to determine whether a suitable modification could be made that would provide a reliable parachute for the test program.
6. The latest design engineering data from WADD, WPAFB, Ohio indicated that the use of the Teflon power cable housing and pulley increased the efficiency of the F-1B automatic ripcord release by 60%. Both test

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parachutes were equipped with Teflon housings and pulleys and six tests were accomplished satisfactorily.

STATINTL 7. On 7 September 1960 a live jump was scheduled at TATU with the writer jumping as "spotter" for [redacted] The spotter's jump was a routine stabilized fall having a duration of 60 seconds from 15,000 feet of pressure altitude. On the second pass of the C-130 [redacted] exited STATINTL at 15,000-ft. pressure altitude. The first eleven seconds of his scheduled 50-sec. free-fall were made without any difficulty. During the first eleven seconds he tumbled end-over-end and finally "ended up" falling flat on his back slightly head-down. This position gave him a good axis point for a spin. He began to slowly turn clockwise and for 20 seconds his rate of turn slowly increased from approximately 25 RPM to 60 RPM; from 30 seconds free-fall to 40.2-sec. free-fall (this is the premature time that he activated his parachute due to the violent spin) his rate of turn progressively grew into a violent spin. It was estimated by the writer from visual observation that [redacted] was spinning at about STATINTL 160 to 180 RPM.

8. Further jumping was cancelled until the project engineer could view the Contraves film coverage or the Askania film to determine the rate of spin.

STATINTL 9. The Contraves film was ruined by the photo laboratory through mal-processing. The Askania film was viewed by the project engineer and Mr. Don Benson of Data Reduction. Mr. Benson's calculations of 180 RPM for [redacted] spin must be assumed as correct until a thorough reduction of the Askania film can be accomplished.

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